

EUROPEAN PATENT OFFICE

Patent Abstracts of Japan

PUBLICATION NUMBER : 2001279412
PUBLICATION DATE : 10-10-01

APPLICATION DATE : 29-03-00
APPLICATION NUMBER : 2000092234

APPLICANT : NIPPON STEEL CORP;

INVENTOR : KONDO YASUMITSU;

INT.CL. : C23C 2/06 C22C 18/00 C22C 38/00 C22C 38/02 C23C 2/28 C23C 2/40

TITLE : Si-CONTAINING GALVANIZED HIGH STRENGTH STEEL SHEET HAVING GOOD CORROSION RESISTANCE AND ITS MANUFACTURING METHOD

ABSTRACT : PROBLEM TO BE SOLVED: To provide a high Si-containing high strength galvanized steel sheet having good a coating property and an excellent corrosion resistance without requiring new equipments, and its manufacturing method.

SOLUTION: A Zn-Al-Fe alloy plating or a Zn-Al-Mg-Fe alloy plating is formed on the surface of a steel sheet containing 0.4-2.0 wt.% Si which is the oxidized state (SiO₂) in the inner sheet. The inner SiO₂ is produced at the time, the steel sheet is oxidized under atmosphere having 0.9-1.2 fuel/air ratio in the oxidizing zone, and successively is reduced in the reducing zone, under an atmosphere controlled where the Si content (mass %) (CSi), a water partial pressure (PH₂O) and a hydrogen partial pressure (PH₂) satisfy the following inequality. -0.8≥log(PH₂O/PH₂)≤0.5CSi-3.

COPYRIGHT: (C)2001,JPO